REMARKS:

In the outstanding Office Action, claims 1-9 were rejected. Claims 1 and 5-9 have been amended and new claim 10 has been added. Thus, claims 1-10 are pending and under consideration. No new matter has been added. The rejections are traversed below.

REJECTION UNDER 35 U.S.C. § 102(b):

In item 6 on pages 3-6 of the Office Action, claims 1-9 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,452,451 (Akizawa et al.).

Akizawa et al. is directed to dividing a plurality of symbol strings to be searched at any position and judging whether the divided symbol strings exist within a symbol string to be searched. In Akizawa et al., each symbol string of interest that constitutes a condition of a search is divided into at least two partial symbol strings at any position (see, col. 5, lines 13-21 and FIG. 6). That is, Akizawa et al. is limited to dividing symbol strings for which a search is to be conducted.

In contrast, the present invention is directed to dividing search-target data into portions, assigning the divided portions of the search target data to search processing apparatuses to execute searches in parallel, where the search target data is updated without disrupting execution of the searches. For example, as shown in FIG. 11 of the present application, the divided search target file 16 is searched using three search servers a, b and d while update file 17 is independently stored and later used to update the search target data.

As recited in amended independent claims 1 and 5-8, the present invention provides a full text search system and method according to which

> search-target character string data [are] divided into a group of character string records and allocated to one or more of the plurality of search processing apparatuses, to correspondingly transmit character string search conditions to each of the search processing apparatuses as search instructions, and to integrate search results received from each of the search processing apparatuses

(e.g., claim 1, lines 6-10). Further, the present invention stores "new character string records to update the search-target character string data" (e.g., claim 1, lines 12-13) and transmits "the new character string records stored... to any one of the search processing apparatuses in advance as a part of the search-target character string data" (e.g., claim 1, last 4 lines).

Independent claim 9 as amended recites, "automatically adding new data to the target data based on request from at least one of the terminals while the plurality of search requests are processed" (claim 9, lines 6-7), where "the search target data is logically divided into regions to correspond to the plurality of search processing apparatuses and the regions are allocated to the plurality of search processing apparatuses for executing searches based on the plurality of search requests" (claim 9, last 4 lines). The Examiner indicated that column 5, lines 15-25 and column 25, lines 62-67 of Akizawa et al. also teaches the present invention's operation of updating search target data without interrupting searches that are being conducted. However, Akizawa et al. is limited to specifying an object of the search using various conditions (i.e., using special symbols so that search results include different combinations of the string to be searched).

For the above reasons, withdrawal of the § 102 rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103(a):

In item 8 on pages 7-12 of the Office Action, claims 1-9 were rejected under 35 U.S.C. § 103(a) based on the combination of U.S. Patent No. 6,691,109 (Bjornson et al.) and U.S. Patent No. 6,738,779 (Shapira).

Bjornson et al. is directed to partitioning query sequences and searching the partitioned query sequences against one or more divided databases. In Bjornson et al., search tasks are designated to be performed by associating each subset of the query sequences with one or more of the subdatabases so that each search task is assigned to be executed by one of a group of computers operating in parallel (see, col. 3, line 65 through col. 4, line 6). That is, Bjornson et al. partitions both the query sequence to be searched and the database itself into smaller sections.

However, the present invention divides the search target data so that the same character string search conditions are searched through each divided portion of the target data, thereby providing an efficient search method for searching through a large amount of target data. In contrast to the present invention, Bjornson et al. requires that each of the subsets of the query sequences be sequentially searched through each of the subdatabases.

The Examiner acknowledged that Bjornson et al. does not teach character strings, thus Shapira was relied on as teaching the use of character strings. However, neither Bjornson et al. nor Shapira teach or suggest an update temporary memory unit which "temporarily stores new

character string records" (e.g., claim 1, lines 12-13) so that searches are not interrupted while the new records are added to the search target data.

Furthermore, the combination of Bjornson et al. and Shapira does not teach or suggest transmitting "the new character string records ... to any one of the search processing apparatuses in advance as a part of the search-target character string data" (e.g., claim 1, last 4 lines) or "automatically adding new data to the target data based on at least one request from at least one of the terminals while the plurality of search requests are processed" (claim 9, lines 6-7).

For the above reasons, withdrawal of the § 103 rejection is respectfully requested.

DEPENDENT CLAIMS:

For at least the above-mentioned reasons, claims depending from independent claims 1 and 5-9 are patentably distinguishable over the cited references. The dependent claims are also independently patentable.

For example, as recited in claim 4, when the present invention determines

> the search processing apparatus to be defective, the search integration unit revokes all the search results transmitted from the plurality of search processing apparatuses, and after incorporating the new records stored in the update temporary memory unit into the search-target character string data ..., the search integration unit divides the search-target character string data and allocates the divided data to usable search processing apparatuses except the search processing apparatus... judged to be defective.

(claim 4, lines 2-8). The cited references do not teach or suggest a full text search method and system that meets this limitation. Therefore, withdrawal of the rejection is respectfully requested for this additional reason.

NEW CLAIM:

New claim 10 recites that the full text search of the present invention includes, "dividing search target data into sets of character strings for search processing systems corresponding to the sets of character strings" (claim 10, lines 3-4) and "executing a search by the search processing systems in parallel with new target data added as needed to the sets of character strings by the search processing systems during the search without interrupting the search" (claim 10, lines 6-8).

Applicants respectfully submit that none of the cited references, alone or in combination, teach or suggest, a full text search method including the limitations quoted above from claim 10. Therefore, it is submitted that claim 10 patentably distinguishes over the cited prior art.

REQUEST FOR EXAMINER INTERVIEW:

The Examiner is respectfully requested to contact the undersigned to arrange an Examiner Interview prior to issuing another Office Action, unless the claims are allowed.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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